## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization

International Bureau



# I SEGUA BUHANDI IL BUHAN KANT BAHT ELIH BUHA ILA KI BERGA HADIK KEBUJUKAN KEBANCHAN KEBANCHAN KEBANCHAN KEBANC

(43) International Publication Date 5 February 2004 (05.02.2004)

**PCT** 

# (10) International Publication Number WO 2004/011891 A3

(51) International Patent Classification7:

G01J 5/04

(21) International Application Number:

PCT/IB2003/002313

(22) International Filing Date: 17

17 June 2003 (17.06.2003)

١,

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: BO2002A000488

25 July 2002 (25.07.2002) IT

- (71) Applicant (for all designated States except US):
  BARALDI CHEMGROUP SRL [IT/IT]; Via Lombardia 2/I-L, I-40060 Osteria Grande (Bologna) (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): RAONE, Cosimo [IT/IT]; via Lombardia 2/I-L, I-40060 Osteria Grande (Bologna) (IT). STRINGHETTI, Gianpiero [IT/IT]; via Lombardia 2/I-L, I-40060 Osteria Grande (Bologna) (IT).
- (74) Agent: TROMBETTI, Gioia>; via Portazza 8, I-40139 Bologna (IT).

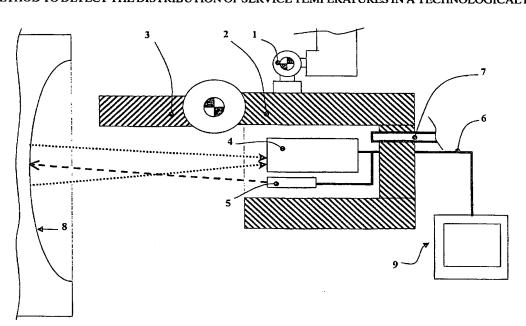
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### **Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report:
  11 November 2004

[Continued on next page]

(54) Title: METHOD TO DETECT THE DISTRIBUTION OF SERVICE TEMPERATURES IN A TECHNOLOGICAL PROCESS



(57) Abstract: A method to detect the distribution of service temperatures in a technological process that includes the automatic and programmable performance of explorative excursions done by means of an adjustable equipment (1) connected to a structure (2) provided with shutter (3) which contains a pointer device (5) and a radiations sensor (4), which after having detected the thermologic parameters of the process, sends them to computer (9) which processes, visualizes and registers them to control and regulate the distribution of the service temperatures in the course of the process.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

# A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01J5/04

According to International Patent Classification (IPC) or to both national classification and IPC

### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  $\ensuremath{\text{IPC}}\xspace 7 - \ensuremath{\text{G01J}}\xspace$ 

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

## EPO-Internal

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Υ .	US 3 933 044 A (LOPER D ROGER ET AL) 20 January 1976 (1976-01-20) column 4, line 28 - line 44	1
Υ.	US 3 101 618 A (HANCE RICHARD J) 27 August 1963 (1963-08-27) the whole document	1
A	US 3 596 519 A (BLONDER FRED ET AL) 3 August 1971 (1971-08-03) the whole document	1
Α .	EP 1 065 484 A (HOLLANDER MILTON BERNARD) 3 January 2001 (2001-01-03) the whole document	1
	-/	·

X Further documents are listed in the continuation of box C.	Patent family members are listed in annex.				
<ul> <li>Special categories of cited documents:</li> <li>"A" document defining the general state of the art which is not considered to be of particular relevance</li> <li>"E" earlier document but published on or after the international filling date</li> <li>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</li> <li>"O" document referring to an oral disclosure, use, exhibition or other means</li> <li>"P" document published prior to the international filing date but later than the priority date claimed</li> </ul>	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  "&" document member of the same patent family				
Date of the actual completion of the international search  24 September 2004  Name and malling address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2	Date of mailing of the international search report  30/09/2004  Authorized officer				
NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Ramboer, P				

	citation of document, with Indication, where appropriate of the relevant	Indo-
ategory °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
1	FR 2 082 719 A (HEURTEY SA) 10 December 1971 (1971-12-10) figures	1
4	US 3 160 009 A (CARNEY DELMAR E) 8 December 1964 (1964-12-08) figure 3	1
4	US 6 091 444 A (MCCARVILLE THOMAS J ET AL) 18 July 2000 (2000-07-18) abstract; figures	1
	·	·
	-	
	·	·
	, , , , , , , , , , , , , , , , , , ,	·
	·	
	,	

### ormation on patent family members

ln*	mation Application N				
	) _	В	03/02313		

US 3101618 A 27-08-1963 GB 917343 A 06-02-196  US 3596519 A 03-08-1971 NONE  EP 1065484 A 03-01-2001 CA 2313360 A1 02-01-206						·	
US 3101618 A 27-08-1963 GB 917343 A 06-02-196  US 3596519 A 03-08-1971 NONE  EP 1065484 A 03-01-2001 CA 2313360 A1 02-01-206							
US 3596519 A 03-08-1971 NONE  EP 1065484 A 03-01-2001 CA 2313360 A1 02-01-206	US 3933044	Α	20-01-1976	CA	997031	A1	14-09-1976
EP 1065484 A 03-01-2001 CA 2313360 A1 02-01-200 CA 2313370 A1 02-01-200 EP 1065483 A1 03-01-200 EP 1065484 A2 03-01-200 JP 2001100148 A 13-04-200 JP 2001099713 A 13-04-200 US 2002146045 A1 10-10-200 US 6377400 B1 23-04-200 US 6614830 B1 02-09-200 CA 2319880 A1 17-03-200 EP 1085307 A1 21-03-200 JP 2001166256 A 22-06-200 FR 2082719 A 10-12-1971 FR 2082719 A5 10-12-19 US 3160009 A 08-12-1964 NONE  US 6091444 A 18-07-2000 DE 19854441 A1 02-06-19 FR 2771579 A1 28-05-19	US 3101618	A	27-08-1963	GB	917343	Α	06-02-1963
CA 2313370 A1 02-01-200 EP 1065483 A1 03-01-200 EP 1065484 A2 03-01-200 JP 2001100148 A 13-04-200 JP 2001099713 A 13-04-200 US 2002146045 A1 10-10-200 US 6377400 B1 23-04-200 US 6614830 B1 02-09-200 CA 2319880 A1 17-03-200 EP 1085307 A1 21-03-200 JP 2001166256 A 22-06-200  FR 2082719 A 10-12-1971 FR 2082719 A5 10-12-19 US 3160009 A 08-12-1964 NONE  US 6091444 A 18-07-2000 DE 19854441 A1 02-06-19 FR 2771579 A1 28-05-19	US 3596519	Α	03-08-1971	NONE			
US 3160009 A 08-12-1964 NONE  US 6091444 A 18-07-2000 DE 19854441 A1 02-06-19 FR 2771579 A1 28-05-19	EP 1065484	A	03-01-2001	CA EP JP JP US US CA EP	2313370 1065483 1065484 2001100148 2001099713 2002146045 6377400 6614830 2319880 1085307	A1 A2 A A A1 B1 B1 A1	02-01-2001 02-01-2001 03-01-2001 03-01-2001 13-04-2001 10-10-2002 23-04-2002 02-09-2003 17-03-2001 21-03-2001 22-06-2001
US 6091444 A 18-07-2000 DE 19854441 A1 02-06-19 FR 2771579 A1 28-05-19	FR 2082719	A	10-12-1971	FR	2082719	A5	10-12-1971
FR 2771579 A1 28-05-19	US 3160009	Α	08-12-1964	NONE	——————————————————————————————————————		- <b></b>
	US 6091444	Α	18-07-2000	FR	2771579	A1	02-06-1999 28-05-1999 27-08-1999